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BULLETIN

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British Columbia Entomological Society

EDITED BY R. V. HARVEY, M. A. VICTORIA, B. C.

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NOTE BY THE EDITOR.

(Continued from last issue)

To any of our local collectors who may be thinking of taking up the study of the Diptera this year I would like to press the claims of this particular family on their attention, for several reasons. First, their abundance, both in species and in individuals, all through the collecting season. Second, the ease with which the family can be distinguished, namely by the false vein referred to by Professor Osburn; a small pocket lens is the only requisite in addition to the ordinary outfit. Third, the offer of Professor Osburn, to whom our best thanks are due, to determine species for any of us who take up the study of this interesting family.

A list of the books which are available to the collector in this branch of entomology may be of use here. They are as follows:

1. The Insect Book. (Howard), pub. by Briggs of Toronto; price $3.75. This contains figures of many of our B. C. flies, and an excellent table for determining the families of Diptera.
2. Manual for the study of Insects. (Comstock), pub. by the Comstock Pub. Co., Ithaca, N. Y. An excellent aid in all orders of insects.
3. Manual of North American Diptera. (Williston), pub. by J. T. Hathaway, New Haven, Conn. Gives good tables of all the genera of Diptera. A new edition, with illustrations, is in preparation.
4. Synopsis of the N. American Syrphidae. (Williston), 1886. Bulletin No. 31 of the U. S. National Museum. Gives full descriptions of all the then known species of American Syrphidae, with 12 plates.
5. Catalogue of North American Diptera. (Aldrich). 1905. Published as No. 1444 by the Smithsonian Institution, Washington, D. C.

SOME NOTES ON SUGARING.

By E. M. Anderson, Provincial Museum, Victoria.

Sugaring to my mind is without doubt the most interesting way of collecting, and the only way for obtaining most of our nocturnal insects. I am positive it will repay the collector, provided he be patient, and not disappointed with a small catch, or not a single specimen for the first night or so.

The liquid I use with best results is as follows:

Coarse brown sugar	1 lb.	Porter (or ale)	1 gill
Treacle	¼ lb.	Rum	1 wine glass full

Mix together the sugar, treacle and beer in a saucepan, bringing the mixture to the boiling point and stirring it meanwhile. Put in corked bottles, and just before applying add the rum. The collector, having provided himself with a wide-mouthed bottle or jar of the aforesaid mixture, a brush to lay it on with, a net, cyanide bottles and a lantern, is equipped for sugaring.

All seasons of the year (except when too great an abundance of flowers is in bloom), yield a certain percentage of moths attracted by the sugar. Warm cloudy nights will be found generally the most favorable; moonlight nights are, as a rule, blank or nearly so.

I have noticed that many nights which appear most favorable will, on the contrary, be unaccountably the most disappointing: not a single moth will make its appearance. The presence of ground fog, more attractive flowers, a coming change of wind or temperature will sometimes account for this. Showers, provided they are accompanied by warm weather are sometimes very favorable, and the catch during these conditions of the atmosphere will generally repay the inconvenience of a wet jacket.

July or August is generally the best time for sugaring, and, if the weather be warm, what is more delightful than to spend a night in the woods?

Just before dusk get your sugar painted on the trees, about four feet from the ground, in long narrow strips, taking care not to allow any to fall at the foot of the tree.

From dusk to about midnight the fun is sometimes fast and furious, hundreds of moths of the common species come and go, with now and then a good thing to sweeten the toil.

One of the most curious things about sugaring is the swarming of one species at a certain hour, and then its replacement by moths of quite a different genus.

Failing trees to put your sugar on, paint walls, fences, flat stones, etc., while pieces of cloth or calico soaked in the liquid may be used to good advantage.

Some very curious things are attracted by sugar; such insects as beetles, woodlice, slugs, etc., are expected as a matter of course, but to my surprise I have seen bats and even frogs feasting on the sweet juice.

Three or four cyanide bottles should be used, about 6 or 8 oz., with as large mouths as possible. To this have a cork sloping outwards above the bottle some little distance to afford a grip. When you see one of the restless hovering kind of insects at your sugar, aim at him stealthily with the mouth of your bottle, and when near enough rapidly close the mouth over him, and with a little care you can manage to get the bottle recorked. Let him remain in the bottle till stupified, meanwhile using another bottle. Many insects sit very quietly at the sugar, but some have a nasty trick of dropping at the least alarm; in such cases the net should be pressed close to the tree to receive them. For such species as Catocala and other wary insects I use the net, as they are very difficult to approach with a bottle.

NOTES AND ADDITIONS TO THE BRITISH COLUMBIAN CHECK LIST OF LEPIDOPTERA.

By F. H. Wolley Dod, Millarville, Alberta.

I have for some time past been collecting notes and fresh records for the B. C. list of Lepidoptera, and think they will perhaps be of some value to B. C. collectors.

To save space I have not included those given in Dr. Fletcher's most valuable Record up to 1906 inclusive. The current issue has not appeared at the time of writing, though some of the following will be referred to in it. All collectors have probably the back numbers, and so can pick out the references for themselves. The same applies to the Bulletin, with a few exceptions. I have, I think in every case, given the references to every additional name since the publication of Dr. Dyar's Catalogue. With the Bulletin records added, the list of Heliophilas will be increased by five, (though I am under the impression that I have seen yet another species in Mr. Harvey's collection, for which I have no name), though two of the names I have bracketed as vague. Orthosia receives a severe knock, four of the five names printed on the list being threatened with dismissal. In these and other instances collectors must discover for themselves whether the reforms mean merely succession or addition; in most cases I suspect the former. Some new records of Mrs. Nicholl will probably be published in the Canadian Entomologist before this by Sir George Hampson. I have some additions in Geometridae, but leave them to be entered by Mr. Taylor.

Where no other reference is given, the records are the writer's own captures.

I. NOTES.

Coenonympha ampelos, Edw. occurs as far east as Windermere, within thirty-five miles of the Alberta boundary. July.

Oeneis beanii, Elwes. Mts. Field and Stephen, Field, B. C., a male on each, July 7th and 8th, more seen. On a mountain top 10 miles east of Windermere, seen but not captured. Probably to be found elsewhere above timber-line in this range. Bean records it from Hector (as subhyalina) in Edw.; Butt.; N. Am.; III., page XV.

Oeneis jutta, Hbn. Emerald Lake (Geddes); Ottertail (Burrison). Both records from Edw: Butt: N. Am.

Pseudohazis shastaensis, Beh. Windermere, July 13th; two taken, a third seen.

Eubaphe immaculata, Reak (Bull 1). This record of Mr. Bush from Revelstoke will not improbably be found to refer to the same form as that taken by the writer at Windermere, and recorded in Dr. Fletcher's Record as **aurantiaca.** A few of the specimens are immaculate or nearly so. I have sent this and Calgary specimens to Dr. Dyar for his opinion.

Neoarctia yarrowi, Stretch. Mt. Stephen; a female, just out, July 7th, about 7500 feet. A male hatched July 29th, from a full-fed larva found basking in hot sunshine on a stone near summit of Mt. Field, July 8th.

Androloma mac-cullochii, Kby. Emerald Lake and Glacier.

Panthea portlandia, Grt. A fine female on the yard-office arc-lamp, Field, July 16th. (I recommend this lamp as a good trap to search, day or night, to anyone passing Field. Moths would sometimes settle on the wires in front soon after it was lighted, and sit for twenty-four hours).

Hadena allecto, Sm. The B. C. record in Dyar's Catalogue is erroneous, and refers to Calgary.

Hadena emissa, Hbn. Windermere, July 9th; one female.

Hadena vultuosa, Grt. This record probably refers to the species described by Dr. Dyar from Victoria as **multicolor.** Allied to Vultuosa, but overspread with dark shadings; reniform contrasting white. This I think applies to the ordinary B. C. form.

Hadena relecima, Morr. Fishea yosemite Grote has now been correctly recorded from Kaslo, and probably refers to the same species.

Hadena maida, Dyar. Glacier, female; Mrs. Nicholl, (Hampson, Cat.; VI. 344).

Hyppa brunneicrista, Sm. I believe this record to be entirely erroneous. The species I saw rather commonly in B. C. collections under this name is the Pacific coast form of **xylinoides** Grt.

Oncocnemis viriditincta, Sm. The species was described from "McLean, B. C." though Assiniboia was meant. The record is therefore erroneous.

Chorizagrotis balanitis, Grt. I saw a specimen in Mr. Cockle's collection, bearing the label Paragrotis fulda, dated Dec. 1st, 1902. It was described from Colorado.

Paragrotis insertans, Sm. Described from Spence's Bridge.

Paragrotis quinta, Sm. Bull 7 (not quinto). Described from Kaslo and High River, Alta. (Annals N. Y. Acad. Science, xviii., p. 92, 1908.)

Paragrotis vallus, Sm. Described from Laggan, Alberta. There is probably no authentic B. C. record.

Paragrotis incubita, Sm. This is referred to by Sir George Hampson as a synonym of **septentrionalis Walk,** which was described from Vancouver Island, and is not the same as **messoria Harr.**.. Prof. Smith accepts Hampson's synonym.

Paragrotis brunneigera, Grt. Was described from Vancouver Island.

Paragrotis intrita, Morr. Ditto.

Paragrotis infausta, Walk. Ditto.

Paragrotis furtivus, Smith. This species is confused with **idahoensis** and probably occurs in B. C., but the specimen I saw in Mr. Bush's collection bearing Prof. Smith's label furtivus, probably the one so recorded by him in Dr. Fletcher's Record for 1906, is a very ordinary form of **nordica.** Mr. Bush told me that he was not sure he had not taken the specimen from a railway car, though it looked perfectly fresh.

Paragrotis nordica, Sm. Described from "Calgary, Canada; and Olds, B. C." Olds is in Alberta.

Paragrotis strigilis, Grt. Was described from Vancouver Island.

Mamestra larissa, Sm. Field, July 7th.

Mamestra goodellii, Grt. The record for this species probably applies to **acutermina Smith,** described partly from Wellington material. Goodellii I believe is not known from the west.

Mamestra segregata, Sm. Described from Laggan, but recorded from Kaslo.

Mamestra ectrapela, Sm. Described from Colorado and "Agnes Lake, B. C." Agnes Lake (Laggan), is in Alberta, and Dyar's record erroneous. I may here point out, however, that Laggan is very near the boundary, and many of the Laggan species might therefore be reasonably expected in B. C. As a matter Bean was a very careful labeller, and would probably not have put a Laggan label on a B. C. capture.

Scotogramma luteola, Sm. Described from Laggan, "B. C.," in error.

Anarta lapponica, Thunb. Kicking Horse Pass; Mrs. Nicholl, (Hampson Cat. vi., p. 416).

Anarta zetterstedtii, Staud. Lake O'Hara; Mrs. Nicholl, (Hampson, Cat., 417).

Zosteropoda hirtipes, Grt. Windermere, July 12th.

Graphiphora oviduca, Guen. Vancouver Island. (Hampson v., 298.)

Cucullia postera, Guen. Windermere, July 12th.

Rancora solidaginis, Behr. Osoyoos. (Hampson vi., 17.)

Rancora strigata, Sm. The only type comes from Victoria.

Papaipema insulidens, Bird. Described from Vancouver Island.

Pyrrhia exprimens, Walk. Wilver, near Windermere, July 9th.

Eucirrhoedia pampina, Guen. Vernon; Coldstream ranch; Miss Ricardo. Hampson, vi., 494.)

Orthosia purpurea, Grt. The name will probably have to be struck out from the B. C. list, as will be explained under the "Additions."

Orthosia decipiens, Grt. The same applies to this species.

Orthosia bicolorago, Guen, var ferruginoides Guen. The species so commonly standing under this name in B. C. collections is **verberata Sm.** The only doubtful specimen I saw, I brought home and compared with my co-types. Prof. Smith has not ferruginoides in his collection as from B. C., and it probably does not occur there. Verberata is undoubtedly distinct.

Orthosia euroa, G. & R. This name should almost certainly be struck from the list also.

Eustrotia albidula, Guen. Windermere.

Syneda hudsonica, G. & R. Very common at Field, July 2nd-8th; less so near Windermere, July 13th.

Odontosia elegans, Strk. Windermere, July 11th.

Pheosia dimidiata, H. Sch. Field, July 6th and 7th.

Habrosyne scripta, Gosse. Field, July 6th.

Olene plagiata, Hbn. Windermere, July 10th.

II. ADDITIONS.

Synchloe creusa, Db-Hew. Windermere, July 13th; Field, (Mrs. Nicholl, Yoho Valley.)

Eurymus elis, Strk. Hector. Mrs. Nichol.

Eurymus pelidne, Bdv. var skinneri Barnes. Yoho Valley, near Field; Mrs. Nicholl.

Brenthis alberta, Edw. Hector, B. C. (T. C. Bean in Edw. Butt. N. Am. III., Pt. xv.). Mrs. Nicholl records it from Hector also, and from head of Yoho Valley and O'Hara Lake.

Brenthis astartte, Db-Hew. Mrs. Nicholl saw it at Glacier crest, and actually took it at Lake O'Hara, and on the pass from Emerald Lake to the Yoho Valley. Two specimens from the latter localities are in my collection.

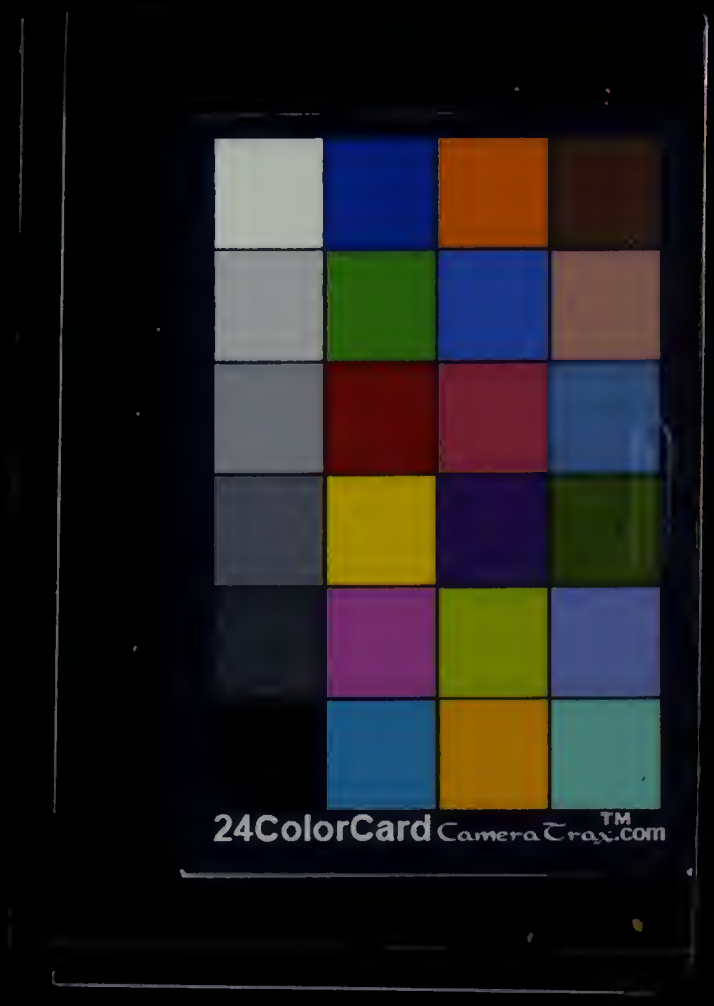
Oeneis brucei, Edw. Recorded by Bean from Hector (Edw. Butt. N. Am. III., Pt. xv., under astarte).

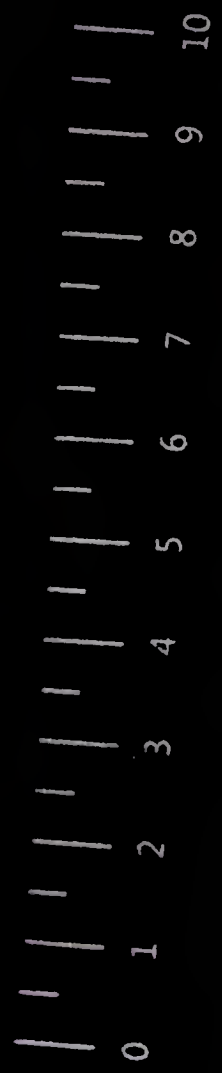
Hesperia centaureae, Ramb. Recorded from "B. C." in Holland's book. I took a very fresh specimen on a mountain near Windermere on July 13th.

Cerma cuerva, Barnes. (Can. Ent. xxxix., p. 10); described from Victoria.

Hadena ferens, Sm. (Can. Ent. xxxv., 134); Windermere, July 11 and 12.

Epdemas melanographa, Hamps. (Hamps. Cat. VI., p. 215.) Type from Vancouver Island.





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